

Submitted By	Comments	Response
National Marine Fisheries Service	<p>1. First sentence. Delete “many” and replace with “multiple”.</p> <p>2. Page six...for the priorities discussion, the CVFPP should also consider these updates as a part of their comprehensive flood risk management study. There should be coordination.</p> <p>3. Page six. In the funds discussion, where is the discussion of incoming funds for repairs?</p> <p>4. Page eight. Under number two, there should be CVFPP discussion.</p> <p>5. Delete the following sentence: protecting these lives and property is important. There is no need to say this. Already stated and implied.</p> <p>6. Page nine. In the paragraph that starts with "a more reliable water supply...", there is discussion of how the levees impact hydrodynamics and thus impact water quality. This is not the only way levees impact water quality. This discussion needs expanding.</p> <p>7. Page nine. In the delta ecosystem section, the incorrect correlation between water quality for humans and water quality for native species is made. Brackish water has been shown to help natives and push back non natives.</p> <p>9. Page 10. What is a rural economy? Last paragraph, sentence with "sited adjoining levees" does not make sense.</p> <p>10. Page 23. Regarding the term “where feasible”. How is this defined? It is often more of a case of where one is willing. Setbacks are almost always “feasible”.</p>	<p>1. “Many” has been changed to “multiple.”</p> <p>2. Council staff are working closely with DWR and CVFPB staff. The levees investment study will guide investments in both project and nonproject levees.</p> <p>3. This paragraph is not intended to list all possible funding sources and uses but mentions a “suite of investments that best addresses State goals and priorities” and a goal would be to keep priority levees in good working order.</p> <p>4. There is discussion in Question 6 on how the CVFPP guides investment in SPFC (project) levees.</p> <p>5. Council feels this point should always be made.</p> <p>6. Although levees may impact water quality in various ways, this particular discussion is focused on water quality as it relates to water supply.</p> <p>7. This discussion is focused on the SWRCB’s regulations for water quality and how Delta levees help maintain water quality to meet the SWRCB’s water quality objectives.</p> <p>8. (missing from original comment letter)</p> <p>9. The Delta’s rural economy is mostly made of farm revenue. Text has been changed from "sited adjoining levees" to “found adjacent to levees.”</p> <p>10. Per the Delta Plan policy ER P4</p> <p>a. Levee projects must evaluate and where feasible incorporate alternatives, including the use of setback levees, to increase floodplains and riparian habitats. Evaluation of setback levees in the Delta shall be required only in the following areas (shown in Delta Plan Appendix 8): (1) The Sacramento River between Freeport and Walnut Grove, the San Joaquin River from the Delta boundary to Mossdale, Paradise Cut, Steamboat Slough, Sutter Slough; and the North and South Forks of the Mokelumne River, and (2) Urban levee improvement projects in the cities of West Sacramento and Sacramento.</p> <p>b. For purposes of Water Code section 85057.5(a)(3) and section 5001(j)(1)(E) of this Chapter, this policy covers a proposed action to construct new levees or substantially rehabilitate or reconstruct existing levees.</p>
Local Agencies of the North Delta	<p><u>General Comments</u></p> <p>1. The linkage between the 15 questions identified for analysis in the Issues Paper and the four overarching objectives listed in the July 2014 Strategy is not explicit. In the future, it would be helpful, in terms of maintaining a consistent analytical approach, to tier off of stated objectives in a linear manner so that the areas that are covered (framed as questions here) match up with the objectives and, where they do not, additional explanation is provided. This issue should be reconciled in the final Issues Paper.</p>	<p><u>General Comments</u></p> <p>1. Comment noted.</p>

	<div>2. Similarly, the Delta Independent Science Board (“Delta ISB”) should be engaged in the development of the objectives as well as the analysis of the specific issue items instead of being engaged only in the latter part of that process. In addition, the scope of the Delta ISB appears to be severely constrained to solely “review the project methodology in accordance with the Delta Science Plan’s provisions for independent scientific review.” This approach is contrary to the overarching requirement of best available science. Scientists should not be limited to solely assess the process/ methodological approach, but should also holistically review the development and scientific adequacy of the initial framing of questions through to the conclusions reached.</div> <div>3. The consulting teams’ (Arcadis, Rand, and ESA) goals, objectives, and tasks related to the development of prioritization information should be clarified, and related to the goals and objectives, and included as an attachment.</div> <div>Detailed Comments on Issues Paper</div> <div>1. Figure 1. Delta Flood Management Facilities (p. 5) is confusingly named and has some apparent errors. Flood management structures are shown, and in the broadest sense the system may be facilities, but the description implies something more formal than exists. The colors are difficult to differentiate and the dotted lines are also too similar. The Yolo Bypass has multiple legal uses, including agriculture.</div> <div>2. According to the Issues Paper, “The outcome of the project will include a final report that proposes a Delta levee investment and risk reduction strategy, and that outlines a suite of investments that best addresses State goals and priorities.” (p. 6.) A suite of investments may not be a reasonable outcome for this process, but instead an adaptable set of criteria may better reflect changing conditions in the Delta.</div> <div>3. LAND appreciates the recognition and highlighting of the relevant provisions under Pubic Resources Code section 29702. (p. 8.) Too often these sections get left out of policy discussions and analyses.</div> <div>4. The Issues Paper states that “Delta levees affect the quality of water on which these users rely because they influence the hydrodynamics of the Delta and the mixing of brackish and fresh water and other constituents.” (p. 9.) This section should recognize that many of the levees are built upon natural features that historically constrained river flows, and that the current levees also bring not just Sacramento River water, but also the San Joaquin, Cosumnes, Mokelumne, Calaveras, and Stanislaus Rivers into the Delta.</div> <div>5. The BDCP is a reasonably foreseeable project that should be considered in the Issues Paper. The BDCP is described in the Delta Plan as the foundation for a more reliable water supply, and analysis of the BDCP’s effect on Delta levees should be address in the Issues Paper. (p. 9.) The economic analysis of the BDCP correctly identifies that the BDCP will have some negative impacts on Delta levees.5 Thus, the Issues Paper should consider those impacts and risks, including the increased levee loading and scouring due to new intakes and water transfers. The BDCP Statewide Economic Impact report identifies that the BDCP was unable to place a quantitative economic value to that BDCP-imposed additional risk to the levees. (Id. at p. ES-14.) However, the quantification of the benefit of BDCP’s preferred alternative on its water security was identified: “The expected welfare benefits of reduced flooding and seismic risks to urban and agricultural water contractors would be \$0.5 billion under the BDCP relative to the</div>	<div>2. Council agrees any Delta Plan update will include best available science not limited solely to methodology.</div> <div>3. November 2014 Council item 12, Attachment 1 clarified Delta Levee Investment Strategy linkage with issue paper questions.</div> <div>Detailed Comments on Issues Paper</div> <div>1. Figure 1 is from the Delta Plan. Council may consider any necessary revisions in updating the Plan’s narrative in response to the Delta Levee Investment Strategy.</div> <div>2. Staff welcome exploring this suggestion more.</div> <div>3. Comment noted.</div> <div>4. A sentence has been added to the first paragraph in this section to acknowledge other rivers.</div> <div>5. BDCP is not a Council project and has not been approved. If it is approved, the lead agency will need to certify an EIR that includes any required analysis of BDCP’s impact on levees.</div>
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	<p>Existing Conveyance Scenario.” (Id. at p. 2.2-4.) Thus, according to the BDCP’s analysis, the much decried risk of the multiple failure Delta levee collapse on exported water is a “mere” 0.5 billion.</p> <p>6. According to the Issues Paper, “Local levee-maintaining agencies sometimes suggest that pursuing ecosystem-related goals and objectives redirects funds that would otherwise be available to improve levees to protect lives and property or secure a more reliable water supply.” (p. 10.) While this is certainly true in some circumstances, this statement is taken out of context. Setback levee costs are grossly disproportional to the ecosystem benefit in most Delta situations. Analyzing for this requirement, and its implementation where feasible, takes away money that could yield vastly longer reaches of secure levee according to the Delta Plan’s own economic analysis. This is an issue of critical importance to local districts and agriculture in the Delta, and clearly fails to meet the flood protection goals of Public Resources Code section 29702, subdivision (d). (Please see additional discussion of this issue under the Funding Impacts to Local Districts section of this letter.)</p> <p>7. The Issues Paper states that “Four geologic and hydrologic forces threaten the Delta levee system with steadily increasing rates and consequences of levee failure: land subsidence, changing inflows, sea-level rise, and earthquakes.” (p. 11, referring to a 2008 PPIC report.) The cited PPIC report, however, includes unsubstantiated assertions based on broad theoretical assumptions. The basic premise for the investment analysis appears to be based on this assertion of levee risk, yet it is not substantiated. A levee investment analysis and prioritization scheme must be based on a credible, scientifically based understanding of the failure modes and actual statistical risk.</p> <p>8. The Issues Paper states that “Other State reports also include recommendations relevant to the Delta’s levees.” Page15 goes on to cite two non-State reports. This characterization should be revised.</p> <p>9. The Issues Paper also refers to potential ecosystem benefits of setback levees in the Plan. (pp. 23-24.) A detailed analysis of this matter is provided separately below.</p> <p>10. The Issues Paper explains that “It will be important, at a minimum, to retain these protections against State liability in updating levee priorities in the Delta Plan.” (p. 25.) The Delta Plan’s priorities and the proposed Delta Levees Draft Investment Strategy clearly create additional liability for the State. The strategy is a prescription for funding priorities and therefore a direct link to potential damages for areas that do not get protection because of these priorities.</p> <p>11. Sea level rise is also mentioned in the Issues Paper as a driving force for the need to prioritize levee investments. (p. 25.) Additional details regarding this issue are provided separately below.</p> <p><u>Funding and Other Impacts to Local Districts of Setback Levees</u></p> <p>1. Though the Issues Paper acknowledges some of the funding limitations of local agencies with respect to levee funding (p. 17), LAND requests that the Council consider in greater detail the potential financial, environmental, and agricultural impacts of its proposed prioritization scheme. The prior analyses of these impacts in the Delta Plan and associated documents have not been coherent, fail to meet best available science, and are incompatible with Public Resources Code section 29702.</p> <p>2. For illustration, the Council’s Ecosystem Restoration Policy 4 (ER P4) seeks to expand</p>	<p>6. See comments in Funding section below</p> <p>7. These levee risk issues are discussed by many entities in many publications. For this issue paper, we chose the quotation from the PPIC work. The levee investment analysis of risk will be based on credible, scientifically based information.</p> <p>8. Sentence revised to: “Additional reports, by the State and other entities.”</p> <p>9. Comment noted.</p> <p>10. The Council is acting pursuant to statutory directive and we do not necessarily agree that the recommended approach will increase liability.</p> <p>11. Response combined with Risk Reduction comments below.</p> <p><u>Funding and Other Impacts to Local Districts of Setback Levees</u></p> <p>1. DSC staff will consider how best to include ability to pay as part of the prioritization analysis.</p> <p>2. and 3. These comments reference an existing Delta Plan regulatory policy. While we</p>
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	<p>floodplains and riparian habitats in levee projects: “Levee projects must evaluate and where feasible incorporate alternatives, including the use of setback levees, to increase floodplains and riparian habitats.” Setting back levees in the Delta involves placement of the new levee at a different location, requiring significant additional volumes of fill soils that must be imported from distant locations, to construct a new levee. The Issues Paper should identify the environmental tradeoffs of excavation and fill projects, and the temporal impacts on loss of habitat at both the borrow and fill locations, which could outweigh perceived biological benefits.</p> <p>3. The Issues Paper should better describe the costs associated with the assessments for setback levees required by ER P4, instead of assuming that the costs will be justified. (pp. 9-10.) These enormous costs may interfere with the enhancement of agricultural resources in the Delta. (For map of areas subject to ER P4, see Appendix 8: Setback Levee Evaluation Areas, Figure 8-1, in Appendix B of The Delta Plan.) Implementing ER P4, including evaluation of alternatives, such as setback levees, could cost \$300,000 per mile of levee in estimated additional planning costs alone, with total costs estimated from \$4 million to \$68 million per mile. Thus, the cost per mile of levee would go from as low as \$4 million per mile to as much as \$68 million per mile, with additional habitat measures raising the cost to \$136 million per mile, a cost increase of 3,400 percent. (Ibid.) These costs will ultimately be passed on to the farms of the Delta, which are responsible for payment of assessments to their respective reclamation districts. These costs will make agriculture in the Delta more costly and contradict the important policy goals of the 2009 Delta Reform Act.</p>	<p>disagree with suggestions that the basis for this policy was inadequate, your comment is duly noted.</p>
	<p><u>Risk Reduction</u></p> <p>1. Risk reduction is a multi-faceted issue. The Issues Paper fails to address this issue in a scientific and substantial manner. LAND recommends a coherent and best available science approach that does not simply recapitulate cursory academic efforts such as those of the PPIC, and the slightly more substantial DWR DRM processes.</p> <p>2. According to the Issues Paper, residential flood protection is identified as the highest priority. (p. 4.) We recommend against using an approach similar to that adopted by the Council for future residential development in the Delta Plan. Under Risk Reduction Policy 2: Require Flood Protection for Residential Development in Rural Areas (RR P2), for instance, new residences must be built to withstand 55 inches of sea level rise. The 55 inches of sea level rise at the Golden Gate referenced in RR P2, however, is not based on best available science and should not be the standard for residential flood protection. Moreover, a blanket standard of 55 inches does not reflect the non-uniform elevation changes between the Golden Gate and more interior locations within the Delta.</p> <p>3. The basis for RR P2 appears to be an interim and outdated recommendation of the Ocean Protection Council that predicted a maximum of 55 inches of sea level rise by 2100. The Delta ISB, however, has noted the Plan’s failure to scientifically assess the standards and the support for the Plan’s conclusions as they relate to both sea level rise and the levee standards, identifying the use of two different and potentially conflicting approaches. As a result of this inattention to best available science, RR P2 could result in massive levees being built at great expense to meet an unsupported standard. This mistake should not be replicated with respect to selection of the appropriate level of flood protection for existing residential development.</p>	<p><u>Risk Reduction</u></p> <p>1. The purpose of the paper is to identify issues that Council needs to address. Some issues will be addressed in forthcoming Delta Levee Investment Strategy while others will need to be answered at a policy level.</p> <p>2. The first priority identified is protection for urban and urbanizing areas, which are defined in state law, not simply “residential flood protection.” The 55 inch sea level rise figure refers to the rise at the Golden Gate. The figure is a starting point, which can be used to determine the actual resulting rise for a particular Delta levee. The figure is being used here to give a good sense of the problem.</p> <p>3. The sea level rise estimate judiciously uses the best available scientific information. That includes the National Research Council’s 2012 report titled “Sea-Level Rise for the Coasts of California, Oregon and Washington: Past, Present, and Future.” (See Table 5.3 on p. 96, projecting a worst case rise at San Francisco of up to 166.4 centimeters [almost 66 inches].)</p>

	<p>4. The charge to the Delta Levees Draft Investment Strategy should be to: Create a conceptual model for the technical protection requirements for the levees, examine and evaluate the available scientific literature, provide a scientific synthesis of those data, and then develop levee standards using that system. This must be done according to the best available science criteria: relevance, inclusiveness, objectivity, transparency and openness, timeliness, and peer review. The Strategy should identify the appropriate level of flood protection for existing residences based on best available science and not assume that sea levels will rise 55 inches uniformly throughout the Delta by 2100.</p> <p><u>Conclusion</u> LAND and local communities want a positive outcome from the Delta Levees Draft Investment Strategy that reflects the legal requirements of Public Resources Code section 29702, while including successful collaboration, functional restoration and ecological improvements, and minimizing impacts on adjacent flood control structures and agriculture. We look forward to working with the Council to meet these goals.</p>	<p>4. The Delta Levee Investment Strategy will include a threat assessment. Council staff are conducting a thorough literature review. The model will evaluate hazards and assets to develop investment recommendations.</p> <p><u>Conclusion</u> Council staff also seek a positive outcome and, likewise, look forward to ongoing collaboration.</p>
Department of Water Resources	<p>1. Page 2, 1st paragraph This quote does not reflect significant improvements since this language was written in the Delta Levee Protection Act of 1992. Taking a quote from a 22 year old piece of legislation does not characterize current conditions or reflect investments made over that time period.</p> <p>2. Page 3, last paragraph The statement "The Legislature ... has not succeeded in imposing priorities on state levee spending in the Delta." implies this is a thwarted goal of the Legislature. The Legislature's goals are neither knowable or a subject of this document.</p> <p>3. Problem Statement, Page 4, last paragraph The quote in this paragraph from The Delta Plan suggests that under existing programs no attempt is made to prioritize State spending on Delta levees. Comprehensive guidelines are in place for both the Delta Levees Special Projects program and the Delta Levees Subventions Program (as approved by the CVFPB) which prioritize spending on key problem areas within the Delta and in accordance with the California Water Code that enacted these programs. Spending on Delta Levees through these programs is managed and prioritized by the Department of Water Resources which includes recommendations by engineers and scientists who have an in-depth understanding of both Delta and Statewide interests and issues. Guidelines and priorities for these individual programs are informed by and consistent with the September 2013 DWR document entitled FloodSAFE – A Framework for Department of Water Resources Integrated Flood Management Investments in the Delta and Suisun Marsh. The priorities in the report are consistent with The Delta Plan.</p> <p>4. Page 6, Council's 2014-2016 Priorities Update This section should include a statement that the Council's new approach will be used to guide existing (or new) Delta Levee Programs and shall be consistent with the State law that enacted these Programs or as modified by future Legislative actions.</p>	<p>1. This quote provides context regarding the issues we are dealing with Delta levees.</p> <p>2. This quote is from the legislative staff's analysis.</p> <p>3. Quote is taken directly from Delta Plan.</p> <p>4. This statement has been added to the end of the second paragraph in this section.</p>

	<p>5. Page 9, Delta Ecosystem Bullet The Suisun Salinity Control Gates are not part of the Levee System as stated.</p> <p>6. Page 12, 4th paragraph starting “For non-project levees...” Water Code section 12984 applies only to the Delta Levee Subventions program under Part 9 of the Code (see Water Code section 12983) and not to other work in the Delta (e.g. Special Projects Water Code 12300-12318) therefore this paragraph should be eliminated or incorporated into the paragraph that follows. Levee improvement projects under the Special Projects Program are not subject to CVFPB approval.</p> <p>7. Page 13, 2nd paragraph starting “For non-project levees...” The last sentence states that DWR reports its findings to the CVFPB for both Subventions and Special Projects activities. This is not true. Only Subventions activities are reported to the Board. Water Code Section 12988 applies to Subventions (see Water Code section 12983) and not to DWR actions under the Special Projects Program.</p> <p>8. Page 13, California Water Commission bullet Insert the words “When requested by DWR...” at the start of the paragraph.</p> <p>9. Page 13, Department of Fish and Wildlife bullet DFW reviews projects to make sure there is “no net long term habitat loss” under the programs. The paragraph incorrectly states that they ensure a net habitat improvement.</p> <p>10. Page 21, paragraph 6 starting “Improvements of non-project levees...” Improvements of non-project levees may be funded either through the Subventions or Special Projects Programs. Funding is not guaranteed.</p> <p>11. Page 22, 3rd paragraph regarding “Ability to pay” ... Studies completed in the 1990’s showed that most agriculture islands have little ability to pay &amp; that State reimbursements should be of maximum allowable until there is a significant change in land use.</p> <p>12. Page 22, “What is the Federal Government’s role?” There is no mention of the Federal government’s increasing interest in improving the integrity of non-project levees throughout the nation. The National Levee Safety Act of WRDA 2007 and Levee Safety provisions of WRRDA 2014 both increase the Federal Government’s role in improving the integrity of non-project levees. While these Federal actions do not increase funds available to Delta levees they are likely to play a role in the establishment of future priorities for action on levees in the Delta.</p> <p>13. Page 23, “What conditions should be attached to State Funding of Levees?” Water Code 12987 cited in this paragraph applies only to the Subventions program (see Water Code section 12983) and not DWR’s Special Projects Program or other State programs and actions that benefit Delta levees. This paragraph is not complete in that respect. Furthermore the section title asks a question that is not answered in the paragraph. The paragraph should acknowledge that the enacting legislation for existing programs establishes the conditions for State funding of levees and that these cannot be changed without new legislation. It may be appropriate for the DSC to recommend conditions that can be subsequently acted upon by the Legislature.</p>	<p>5. Changed “including” to “along with.”</p> <p>6. This sentence has been removed.</p> <p>7. Sentence has been corrected to eliminate Special Projects.</p> <p>8. Text has been inserted.</p> <p>9. This sentence has been corrected.</p> <p>10. The paragraphs describing the Subventions and Special Project programs have been revised.</p> <p>11. Different agricultural lands in the Delta may have drastically different abilities to pay for levee maintenance based on Figure 22: Average Revenues per Acre of the Delta Protection Commission’s <i>Economic Sustainability Plan for the Sacramento-San Joaquin Delta</i>.</p> <p>12. At this time and for the Delta, it appears the federal government is moving away from having an interest in Delta levees based on the recent Draft Delta Islands and Levees Feasibility Study release by USACE. However, discussion of the WRRDA and levee vegetation has been added to the paper in a separate section to acknowledge federal actions related to non-project levees.</p> <p>13. The issue paper is meant to raise key questions and provide pertinent information but not to provide specific answers or decisions related to these questions. The Council’s Delta Levee Investment Strategy may include various recommendations to the Legislature.</p>
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	<p>14. Page 24, paragraph starting “Levee improvements are also supposed...” This paragraph refers to the Delta Master Recreation Plan and then changes to a discussion of meeting “ecosystem objectives” rather than recreation objectives. It is not clear which requirements are meant in the statement: “Some local levee maintenance districts find these requirements burdensome”. This statement should include a citation. It is not clear what “provisions” are being met in the reference to the Special Projects Program in this paragraph.</p> <p>15. Page 24, First paragraph under “What if local agencies don’t act?” The statement “DWR is to annually inspect non-project levees...” with a reference to Water Code 12989 is misleading. Water Code 12989 applies only to the Delta Levees Subvention Program and not the Delta Levees Special Projects Program (see Water Code section 12983) or other DWR programs. The Water Code does not currently require DWR to inspect all non-project levees in the Delta.</p>	<p>14. Paragraph has been modified to provide clarification.</p> <p>15. Sentence has been revised to clarify Subvention funded levees are inspected.</p>
Contra Costa Water District	<p>1. CCWD supports the approach to funding levee investments outlined in the Key Issues Paper, "[t]he new approach should guide the ongoing investment of State funds in a way that considers the interconnection of assets protected by levees, the exposure of these assets to different risk factors, the beneficiaries of levee protection and the appropriate cost-share allocation for this protection" (p. 6).</p> <p>2. The Key Issues Paper does an excellent job of summarizing previous levee investment efforts. It could be improved by recognition of the interrelated nature of habitat restoration, levee armoring and flood risk in the Delta.</p> <ul style="list-style-type: none"> <li>- A recent study has shown that maximum water levels and flooding risks were reduced overall if certain areas of the shoreline were inundated (Holleman and Stacey, 2014). The authors concluded that inundation areas such as tidal marsh, introduce large energy sinks that reduce the risk of flood in other areas. In other words, those areas protected by armored levees would experience lower water levels and lower flood risk if other areas were allowed to be inundated. Therefore, investments in levees should be considered in conjunction with investments in future habitat restorations.</li> </ul> <p>3. To reduce flooding risk in the Delta and sustain that reduction of risk in the Delta as sea level rises, the Delta Stewardship Council should consider coordinating recommendations for areas that should be inundated or restored to tidal habitat and those areas that should be protected by levee enhancements, perhaps through a joint effort with the Delta Conservancy.</p> <ul style="list-style-type: none"> <li>- Some types of habitat restoration projects may repel or reduce salinity intrusion into the Delta thereby improving water supply reliability in the face of climate change.</li> <li>- Identifying both levee and habitat restoration projects that will achieve multiple benefits.</li> </ul> <p>4. We urge the Council to consider a more comprehensive approach that evaluates the State's investments across a broader spectrum of the Delta Plan policy goals.</p>	<p>1. Comment noted.</p> <p>2. This is touched on with our recommendations to implement setback levees where feasible and our Delta Levee Investment Strategy will account for the benefits of ecosystems and habitat restoration.</p> <p>3. The Council is actively engaging other agencies and seeking input on these topics as part of the Delta Levee Investment Strategy process.</p> <p>4. The Council appreciates this comment and would welcome further discussion with CCWD on this.</p>
Central Delta Water Agency	<p><b>Comments below address the Draft Delta Investment Strategy:</b></p> <p>1. The definitions are not clear. The traditional approach to acceptable risk and level of protection from flooding treated so-called agricultural levees differently than urban levees. FEMA uses a population of 10,000 or more to define an urban or urbanizing area and the issue of desired level of protection remains as to smaller communities where population is significant but less than 10,000.</p>	<p>The Council appreciates your insight and looks forward to continued coordination throughout the development of the State Investments in Delta Levees issue paper and the Delta Levee Investment Strategy project.</p>

	<p>2. The O&amp;M manuals were intended to be subject of agreement along the parties.</p> <p>3. Although the availability of FEMA restoration assistance has also transitioned, there is currently a more reasonable and helpful approach from FEMA than from the USACE. Reliance on the USACE for rehabilitation assistance to agricultural areas after a flood will more than likely result in no assistance.</p> <ul style="list-style-type: none"><li>- The regulation by the Board and USACE has become increasingly inconsistent.</li><li>- The USACE has developed policies which reduce their willingness to assist with restoration.</li></ul> <p>4. <b>Priorities For Funding:</b></p> <ul style="list-style-type: none"><li>- Regulatory requirements have also been increasing. In 2008 in response to a suggestion by Joe Grindstaff, we submitted a five (5) year plan to be funded at \$100 million per year. At that time it was our understanding that there was \$760 million of bond funds earmarked for the Delta levee subvention and Special Projects programs. A copy of the plan was sent to you by e-mail.</li><li>- For many Districts, the minimum crown width objective is 22 to 24ft. rather than 16ft. to allow for passage of two way truck traffic floodflight, additional resistance to beaver den collapse and to provide a base for levee raising to resist future rises in sea level.</li><li>- The so-called HMP standard is not an engineering standard as does not purpose to represent a stable levee cross-section for Delta levees. The HMP was not intended to be a levee structural standard but rather a mechanism for measuring good faith progress at the State and local level to satisfy for an interim period FEMA’s requirement for flood hazard mitigation.</li><li>- FEMA appears to be moving in the direction requiring that the PL 84-99 standard to be achieved and further that USACE approval be obtained within five (5) years. Such a requirement would be impossible to achieve within the required time frame given the DSC plan and constraint on levee assistance. Additionally substituting restoration assistance for FEMA assistance will likely mean no assistance.</li><li>- The resulting risk is huge. DWR’s Delta Risk Management Study sets the cost of replacement of Delta Infrastructure within the 100 year Flood Limits at \$56.3 billion in 2005 dollars. Even with the BDCP tunnels, water for export will continue to be moved through the Delta channels with about 3,000 cfs most of the time and entirely during about 40 to 50% of the years.</li><li>- The Economic Sustainability Plan of the Delta Protection Commission which was subjected to peer review also recognized the Delta levees as system and recommended the PL 84-99 standard as the minimum to be applied through the Delta. It is unfortunate that the DSC ignored the substance of the Plan.</li><li>- The DSC levee priorities for levee investments should recognize the need for achieving minimum adequate levee stability throughout the Delta while at the same time providing funding for the best guess at where a higher level of protection should be provided. The interrelationship of the Delta levees is real and the Delta levees are in fact a system.</li></ul>	
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	<p><b>5. Hazards:</b></p> <ul style="list-style-type: none"><li>- Hazards such as beaver dens and other intrusion from rodents, seismic activity and localized foundation defects are not conducive to meaningful quantification for the purpose of an investment strategy.</li><li>- The DSC Draft Levee Investment Strategy attempts to quantify risk and benefit in a system where many of the variables are extremely difficult to quantify.</li><li>- As we have concluded previously and now urge your consideration, the best way to prioritize funding for Delta levees investment is to apply a portion system wide to achieve an adequate minimum engineering standard and take another portion to apply where the threat or risk is thought to be greater.</li><li>- On the matter of the ability of the local Reclamation Districts to cost effectively accomplish levee work, it is important to recognize that regulatory constrains and program requirements have been increasing.</li></ul>	
The State Water Contractors	<p><b>(underline text represents proposed additions):</b></p> <ol style="list-style-type: none"><li>1. Page 6- the draft paper states that the “[s]trategy will be developed using a comprehensive methodology that considers” a number of factors. We recommend that this paragraph list the significant public ecosystem and water quality impacts and benefits associated with flooded islands as part of the factors that will be considered.</li><li>2. Page 8- there is a discrepancy in the 1996 AB 360 legislative language for Suisun marsh levees. While the law states 12 miles, the legal description is approximately 18 miles.</li><li>3. Page 9- “Delta levees affect the quality of water, <u>both positively and negatively</u>, on which these users rely because.....”. We recommend that the levee paper include a statement regarding the negative impacts of dissolved organic carbon discharged from ongoing agricultural activities on levee protected islands.</li><li>4. “<u>The Select</u> Delta levees also are important to the conveyance of water from the Sacramento River through the Delta.....”</li><li>5. “Failure or alterations of levees that result in degraded water quality can also harm water supplies....” <u>The reverse is also true. The failure or alteration of certain levees can result in improved water quality.</u></li><li>6. Delta ecosystem. The Delta’s and Suisun Marsh’s ecosystems depend on <u>restoring native habitats and</u> the water quality. <u>Ninety eight percent of the historic native habitat was lost due to levee construction and draining of the former marshlands.</u></li><li>7. Page 10- “Local levee maintaining agencies sometimes suggest that pursuing ecosystem related goals and objectives redirects funds that would otherwise be available to improve levees.....” The following statement should follow. <u>Resource agencies sometimes suggest that</u></li></ol>	<ol style="list-style-type: none"><li>1. Comment noted.</li><li>2. The approximate distance of 12 miles was taken from the referenced letter and is noted in Water Code section 12311.</li><li>3. This comment is about discharges for agricultural use rather than investments in levees.</li><li>4. Sentence has been revised.</li><li>5. A sentence has been added referring to the DRMS analysis that states pre-flooding of some islands could reduce water supply disruption in the event of an emergency.</li><li>6. A sentence has been added to the Delta ecosystem section stating “98% of the freshwater emergent marsh in the Delta has been lost.”</li><li>7. Comment noted</li></ol>

	<p><u>pursuing current levee related goals and objectives are harmful to aquatic ecosystem restoration.</u></p> <p>8. Delta as place. Include several sentences regarding the Delta’s aesthetic value including remnant tidal marsh areas that provide rich ecosystem diversity and a glimpse into the past when the Delta teemed with approximately 400,000 acres of abundant wildlife – 98% of which has been lost.</p> <p>9. Page 11- <b>What threatens Delta levees?</b> “Four geologic, <u>anthropogenic</u> and hydrologic forces threaten the Delta levee system with steadily increasing rates and consequences of levee failure: land subsidence <u>caused by agricultural practices</u>, changing inflows,.....”Include a sentence stating that boat wakes, rodents, wind fetch, ongoing levee creep and other factors also threaten Delta levees.</p> <p>10. Page 15- The following sentence should be modified to include a characterization of the risk level that applies to the range of cost estimates: “The costs of upgrading delta levees <u>to ?? levels of risk</u> are substantial, totaling \$3.8 billion to \$4.28 billion....”</p> <p>11. Page 17- <b>Table 4, Priorities and Beneficiaries</b> Table 4 indicates the methods of evaluating levee investments with “interim priorities to be used until a comprehensive investment methodology could be developed”, based upon DWR Priorities for Delta Integrated Flood Management. There will continue to be reliance on the water quality and water supply benefits afforded by the integrity of the levees along the Middle River channels from the standpoint of dual conveyance and emergency conveyance initiatives for delivery of freshwater from the Sacramento River to the export pumps. Levees of strategic value for water quality and supply purposes include levees along critical corridors to the export pumps. In addition, additional analysis could be useful in identifying management approaches that prevent an increase in salinity intrusion due to tidal trapping at the eight western islands (Bethel, Bradford, Holland, Hotchkiss, Jersey, Sherman, Twitchell and Webb Islands.)</p> <p>12. Page 19- The following is a general comment regarding differing levels of flood protection offered by various plans: All of the standards provided are prescriptive or geometry based. Instead, prudent engineering and planning would dictate levee improvements be based upon site-specific levee needs and island benefits.</p> <p>13. Page 22- The following sentence should be further explained: “Information about local agency’s ability to pay, however, has been collected for only a few districts in the Western Delta.” Given that the Special Projects program has been expanded to be Delta-wide, ability to pay studies should be completed for every island.</p> <p>14. Page 23- Regarding provisions to acquire easements along levees the report states “few easements have been acquired.” An explanation should be added regarding why no easements have been acquired.</p> <p>15. Page 24- Protecting restoration opportunities. The statement that “significant adverse impacts</p>	<p>8. This section is intended as an overview. Chapter 5 of the Delta Plan has a much more detailed discussion of the Delta as a place.</p> <p>9. Council does not want to strike an accusatory tone with the issue paper. Sentence starting with “boat wakes” has been added to this paragraph.</p> <p>10. These estimates are explained in greater detail in Table 1.</p> <p>11. The Delta Levee Investment Strategy currently being performed will identify levees that are beneficial to water supply.</p> <p>12. Comment noted.</p> <p>13. Comment noted.</p> <p>14. Additional explanation has been added.</p> <p>15. Page 9’s summary of state interests focuses on broad outcomes, not specific policy</p>
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	to future restoration opportunities are to be protected...” is important. We suggest that similar language be used in the Introduction and in the ecosystem section on page 9.	recommendations.
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<p>California Central Valley Flood Control Association</p>	<p><b>I. Process &amp; Development Recommendations</b></p> <p><b>a. Joint Concurrence on a Delta Map</b> The Association believes a critical outcome of the DSC’s levee prioritization effort should be consistency and accuracy of Delta levee maps being used in planning documents and websites of the DSC, DPC, Delta Conservancy, BDCP, Central Valley Flood Protection Board (CVFPB), DWR, Central Valley Flood Protection Plan (CVFPP), and the U.S. Army Corps of Engineers (USACE).</p> <p><b>RECOMMENDATION:</b> As a first step of the Delta Levee State Investment Strategy, ARCADIS should convene a panel to meet at least once to concur on a Delta islands and levee map, including reaching agreement on the island names, RD#s for islands, and the total number of miles and locations of SPFC project levees, non-project levees, and any other category of levees if necessary such as restricted height, Deep Water Ship Channel, Suisun Marsh levees that are adjacent to but not part of the legal Delta, or breached levees that are no longer managed such as Liberty Island’s in the Yolo Bypass. Then the DSC should release the map with island, RD#, and levee statistics to the public for review and comment, with the other State Delta agencies and CVFPB bringing to their boards and public meetings for discussion and comment at the same time. The panel can be convened a second time if necessary to resolve any issues identified in public comments. If not, then the DSC can submit a written request to the Governor requesting he issue a directive to all State agencies to use the map on their websites and in all future regulatory, planning, and informational documents they produce regarding Delta island geography or flood protection.</p> <p><b>b. Local Expertise on Levee Benefit Allocation</b> The DSC October 30, 2014 “Delta Levees Investment Strategy Update” (Agenda Item 11) mentions identifying “outside” technical expertise to provide input on the development of a methodology for prioritizing Delta levee investments.</p> <p><b>RECOMMENDATION:</b> The Council should utilize the local levee funding expertise by either convening a separate panel of Delta engineers representing Delta RDs, cities, counties, and regional agencies with flood control responsibilities or appoint one Delta RD engineer and one Regional Agency engineer with levee design, construction, and financing experience to serve on the Review Team.</p> <p><b>c. Interagency Agreement Lacks Local Representation</b> The DSC’s October 7, 2014 Agenda Item 11, Attachment 1, white paper on “Methodology and Scientific Basis to Support a Delta Levee Investment Strategy” states intent to “objectively” lead to a prioritization of islands. CCVFCA recommends including local levee maintainers responsible for flood control in the Delta such as local RD, cities, and counties in the current DSC/DWR/CVFPB Interagency Agreement for development of the investment methodology</p> <p><b>RECOMMENDATION:</b> As legal subdivisions of the State and due to their role in performing O&amp;M for the State on SPFC project levees and submitting grant proposals for Delta Levee Subventions projects and apportioning flood protection benefits under a Prop. 218 proportionality methodology, CCVFCA believes the Delta RDs are appropriate entities for the Council to consider adding on to the Interagency Agreement between the DSC and DWR to facilitate the joint development of a methodology and tool to quantify assets and benefits associated with the State’s interest in funding future Delta levee maintenance and improvements.</p>	<p>I.a. This would likely be a useful and worthwhile effort. However, it is beyond Arcadis’ current scope of work. Council staff are exploring the need to update the map included in the Delta Plan. We are working with existing data including input from local agencies.</p> <p>I.b. Council staff are conducting extensive outreach to engage all stakeholders with expertise in the Delta.</p> <p>I.c. Council staff are conducting extensive outreach to engage all stakeholders with expertise in the Delta. The Delta Protection Commission, a key partner in the Delta Levee Investment Strategy, includes representatives of Delta reclamation districts, cities, and counties.</p>
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	<p><b>II. General Comments on Issue Paper</b></p> <p><b>a. Introduction and Problem Statement is One-Sided</b> <b>RECOMMENDATION:</b> Revise the Introduction and Problem Statement to acknowledge the progress made to reduce the frequency and severity of Delta levee failures since the 1986 flooding so the final strategy can credibly define the amount of work still needed based on an accurate portrayal of current levee conditions.</p> <p><b>b. Key Issues Lack Nexus to Factors to Consider in Methodology</b> <b>RECOMMENDATION:</b> Providing more details regarding the context and nexus associated with the ultimate criteria and factors that are selected for the methodology will be important for the Association’s members, decision-makers, and the public to understand why they are chosen. Understanding the background and reasoning will be critical for the Association to provide constructive input on the quality of the factors and criteria ARCADIS uses to develop a levee prioritization methodology.</p> <p><b>III. Key Issues Missing for Developing Methodology</b></p> <p><b>a. Effectiveness of Past Delta Levee Investments Is Key Issue</b> The Association encourages this process to include an evaluation of the effectiveness, efficiency, and durability of the programs, processes, and projects the State has funded annually through DWR guideline criteria and ranking since the flood damages experienced in 1986. Have these past investments achieved the “basic goals of the State for the Delta” defined in Public Resources Code section 29702 mentioned on page 8 of the Issue Paper?</p> <p><b>RECOMMENDATION:</b> The Issue Paper should include a comprehensive evaluation of the effectiveness of the historical and more recent State Prop. 1E and 84 investments in Delta levee projects funded through the Delta Subventions and Delta Special Projects Programs in reducing the frequency, quantity, and severity of Delta levee failures as a key issue for updating priorities.</p> <p><b>b. Delta Levees Must Be Seen As Part of A System</b> The Association...urges the Council to keep a system-wide approach of performance and benefits in mind as it develops a methodology to prioritize future State investments in the Delta’s complex system of inter-connected and inter-dependent levees.</p> <p><b>RECOMMENDATION:</b> Incorporate additional flood protection system history and description to the Introduction and Problem Statement to provide context and nexus for the consultant and panel of technical scientific experts to consider the system-wide flood protection design, performance, and benefits when they develop an effective levee investment methodology.</p> <p><b>c. Usage of Proper Data Is Important</b> <b>RECOMMENDATION:</b> Utilize more recent reports as references, avoid using assertions unsubstantiated by studies or current data, and convene a panel of local flood control experts to develop an accurate map and provide current information on levee conditions. The Association has provided a list of current flood protection and Delta resource documents as an attachment to these comments.</p>	<p>II.a. While improvements have been made, DWR reports from 1975 through 2011 show the amount of levees that should be improved has not decreased significantly.</p> <p>II.b. This is not necessary for the State Investments in Delta Levees issue paper, but will be reviewed as the Delta Levee Investment Strategy is developed.</p> <p>III.a. The intention of the paper is to identify issues that policy makers should consider for discussion and to determine what items could be answered by the Delta Levee Investment Strategy.</p> <p>III.b. This will be useful discussion as part of the Delta Levee Investment Strategy project.</p> <p>III.c. Council staff intend to use the best available existing data and welcome any additional information that can be provided.</p>
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	<p><b>IV. CORRECTION OF ISSUE PAPER INACCURACIES</b></p> <p><b>a. Table 1 Comments:</b> Failure to correct this information will result in a flawed investment strategy that is unreliable and lacking credibility.</p> <ul style="list-style-type: none"><li>• <b>Double-Accounting</b> - There appears to be double-accounting going on in this Table, resulting in inflated cost estimates for Delta levee improvements by more than \$1 billion. Presumably both the CVFPP and DRMS cost estimates are for the same levee mileage, so adding the numbers together is incorrect. Instead of totaling the combined costs of both the 2012 CVFPP and the 2011 DRMS estimates for Delta levee improvements, Table 1 should compare the different estimates to show there is a difference of \$1.18 billion for the Low Cost Estimate and \$1.66 billion for the High Cost Estimate.</li><li>• <b>Footnotes</b> - We would also point out that later in the Issue Paper (page 13, paragraph 3, Question 6), the document states the CVFPP cost estimates are not of sufficient detail to support project-specific actions such as design and construction. That fact should either be noted in the "Source" footnote below Table 1 or the CVFPP Delta levee estimates should be deleted because the estimate is cursory and not substantiated by actual evaluation of current Delta levee conditions. The CVFPP Regional Planning process is currently evaluating the improvements necessary in the three regions covering the Delta. These regional reports will be completed by the end of 2014 and may offer a more updated and accurate source of cost estimates. The Delta Protection Commission's Economic Sustainability Plan (ESP) is also a good source for qualitative levee information, but will require updating to incorporate levee improvements already completed or currently underway using prop IE or 84 funds.</li><li>• <b>DRMS Issues</b>- The table also relies upon the DRMS estimated costs to improve 764 mile of levee to PL 84-99, however there are only about 350 miles of SPFC project levees that are required to meet PL 84-99 standards, therefore the DRMS 2011 cost estimate of \$1.31 billion is overestimated significantly. As the Association has pointed out in prior comments to the Council, the DRMS data is old (circa 2005), and therefore outdated, particularly in light of annual Delta levee funding being tripled every year since voters approved Propositions 1E and 84 in 2006.</li></ul> <p><b>RECOMMENDATION:</b> Revise Table 1 to eliminate the double-counting of levee improvements on the same levee miles. Replace CVFPP estimates with ESP cost estimates, and maybe the CVFPP Regional cost estimates if they are more than superficial estimates.</p> <p><b>b. Figure 2 Comments:</b> <b>RECOMMENDATION:</b> The map should be revised to remove lines depicting low elevation non-flood control structures and change project levee color to make their location more clear. The Association recommends using the DPC's ESP and CVFPP's documents on the SPFC, and other documents we have listed in an attachment to these comments as references, and further recommends ARCADIS convene a panel of Federal, State, and local Delta and flood control agencies representatives to develop a map identifying Delta island names, RD #s, and location of project and non-project levees.</p> <p><b>c. Overestimated Quotes of Total Recent Levee Investments</b> On page 3, in the second paragraph, the Issue Paper states that an estimated \$700 million of state funds have been "invested" in Delta levee maintenance and improvement since 1973.</p>	<p>IV.a. Table 1 has been revised to compare the estimates from the CVFPP and DRMS.</p> <p>IV.b. Figure 2 is from the Delta Plan. Council may consider any necessary revisions in updating the Plan's risk management narrative in response to the Delta Levee Investment Strategy.</p> <p>IV.c. A sentence has been added to clarify that the \$700 million includes \$274 million encumbered for future Delta levee projects.</p>
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	<p><b>RECOMMENDATION:</b> The Council should verify whether \$700 million is a combined total and acknowledge the local portion of the total invested since 1973.</p> <p><b>d. Levee Vegetation Requirements Misrepresented &amp; Over-Optimistic</b> The paragraph on page 10 mentioning the U.S. Army Corps of Engineers’ (USACE) policy prohibiting vegetation on levees (see attached 2008 USACE policy paper) fails to provide the context and nexus regarding its relevancy to the question asked or to the criteria to be used in developing a prioritization methodology. In addition, the last sentence of that paragraph stating progress in having the USACE exempt Delta levees from this policy is incorrect. The recently approved Water Resources &amp; Reform Development Act (WRRDA) directed the USACE to review and revise their guidelines by 2016, however the Association is not aware of the USACE ever giving any indication of being willing to “exempt” Delta levees, California levees, or any other levees in the nation from the levee vegetation prohibition.</p> <p><b>RECOMMENDATION:</b> Adopting a PL 84-99 levee standard or something lesser may be a discretionary policy decision, but the investment strategy should incorporate the different consequences to SPFC project versus non-project levees, particularly the State's liability. The issue paper should also reflect the costs of removing existing levee vegetation from SPFC project levees that DWR estimated in a letter to the USACE (see attached DWR letter and policy paper) as Delta maintenance costs needed to comply with PL 84-99.</p> <p><b>e. Incorrect Statement on Subvention Eligibility</b> Question # 7 has incorrect statement on page 16 claiming 50% of an island’s acreage must be in the Primary Zone for project levees to be eligible for Delta Subventions funding. This is not true. All project levees in the Primary Zone are eligible.</p> <p><b>RECOMMENDATION:</b> Simply delete the 50% acreage wording so is clear all project levees in the Primary Zone are eligible for Subventions funding.</p> <p><b>V. COMMENTS ON KEY ISSUE QUESTIONS</b></p> <p><b>a. Question 1: What are the Delta’s Levees?</b> CCVFCA recommends the qualitative evaluation in DPC’s ESP as a good starting point.</p> <p><b>Specific Corrections and Scoping Suggestions:</b></p> <ul style="list-style-type: none"><li>• <u>Define Levee Categories</u> - The differences between project levees, non-project levees, and restricted-height levees needs to be defined. The differences between the varying engineering standards, costs, and why each would be selected over the other should be defined and quantified.</li><li>• <u>Eliminate Non-Flood Control Levees</u> - It should be noted that not all non-project levees are eligible to participate in the Delta Levees Subventions Program, due to the fact that they have restricted height or are built within floodways, both of which are NOT considered flood control levees. Therefore, the actual non-project levees eligible for rehabilitation under the Subventions Program do not total over 700 miles, as seems to be implied by Table 1’s DRMS cost estimate and the preceding paragraph in the Introduction.</li><li>• <u>Acknowledge the Delta Levees are Part of a Larger Central Valley Flood Protection System</u> –</li></ul>	<p>IV.d. The focus of this section is to describe the Delta’s ecosystem and why it is a State interest. The discussion of levee vegetation pertains to the ecosystem.</p> <p>On page 10, “Some progress has occurred on this recommendation” has been changed to include directions in the WRRDA to the USACE.</p> <p>Your suggestion of evaluating vegetation remove costs will be discussed as part of the Delta Levee Investment Strategy.</p> <p>IV.e. California Water Code Section 12980 (f) defines “Project levee” to mean a federal flood control levee, as shown on page 40 of the Department of Water Resources “Sacramento-San Joaquin Delta Atlas,” dated 1993, that is a project facility under the State Water Resources Law of 1945 (Chapter 1 (commencing with Section 12570) and Chapter 2 (commencing with Section 12639) of Part 6), if not less than a majority of the acreage within the jurisdiction of the local agency that maintains the levee is within the primary zone of the delta, as defined in Section 29728 of the Public Resources Code. Under the Subventions Program, this is taken to mean that project levees in the Primary Zone are eligible if more than 50% of land acreage of the island in the Delta is in the Primary zone.</p> <p>V.a. Levees are discussed in more detail in the Delta Plan. This is intended as an overview but we do appreciate any additional information provided that would be useful in our Delta Levees Investment Strategy.</p> <p>Regarding the eligibility of levees to participate in the Subventions Program due to height restrictions, requirements for eligibility to participate in the Subventions Program are stated in Section 12986 of the Water Code. Height limitations do not affect Subventions Program eligibility.</p>
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	<p>This section should describe not only how Delta levees operate as an inter-dependent system in terms of providing flood protection and ecosystem benefits such as water quality in the region, but also their importance as critical components necessary for the larger SPFC flood protection system to perform as designed.</p> <ul style="list-style-type: none"><li>• <u>Define and Account for Levee Funding Distinctions</u> – In addition to defining the different categories of levees in the Delta, this question/section should also describe further distinctions between levees in terms of their funding eligibility.</li><li>• <u>Separate Maintenance and Improvement Costs</u> – The methodology should account for not only State investments in bringing some levees up to a higher standard, but factor in the annual maintenance costs to keep over time, including addressing sea-level rise improvements.</li><li>• <u>Recommended Flood Protection System Resource Documents</u> – In addition to the Delta Protection Commission's Economic Sustainability Plan (ESP) as a source of better information about the physical location of levees, CCVFCA recommends ARCADIS and the Council utilize some of the more recent flood protection documents as resources which we have listed in an attachment to these comments.</li></ul> <p><b>b. Question 2: What Goals and Objectives Should State Investments in Delta Levees Further?</b></p> <p>More factors not necessarily endorsed by the Association, but offered as additional types of State goals and objectives for the Council to consider are:</p> <ul style="list-style-type: none"><li>• <u>Existing Obligations</u> - Comply with the State’s assurances (CVFPB) provided to federal government (USACE) to assume responsibility for the ongoing maintenance and integrity of all State Plan of Flood control facilities (SPFC project levees, bypasses, etc).</li><li>• <u>Eligibility for Federal Levee Repair Funding</u> - There is no more effective way to leverage federal funds than by retaining flood control works’ eligibility in PL 84-99 because the repair and recovery costs after a flood event are 100% federally funded.</li><li>• <u>CVFPP Consistency</u> -The State Legislature mandated the adoption of the Central Valley Flood Protection Plan to be the guiding flood protection plan and investment strategy for the Central Valley, including the Sacramento-San Joaquin Delta.</li><li>• <u>Legislative Mandates</u> - Examples include 200-year level of protection (or adequate progress towards) for urban and urbanizing areas by 2016. Several urban communities are in the Delta’s Secondary Zone (e.g., Stockton, West Sacramento, Lathrop, Antioch, etc.) will face land use restrictions if not accomplished by 2025. Most of these urban areas are protected by SPFC project levees, so means liability exposure to the State.</li><li>• <u>FEMA</u> - Federal disaster aid, local building requirements, and flood insurance rates lfor businesses and homeowners are all determined based on the level of flood protection provided.</li><li>• <u>Quick and Cost-Effective</u> - Because the local agencies fund 100 percent of a levee project up front and are reimbursed for the State’s cost-share after completion in the Delta Subventions Program, there is great incentive for the local agencies to perform the work in the most cost effective and expedient manner possible.</li></ul> <p><b>c. Question 3: What are the State’s interests in the Delta?</b></p> <ul style="list-style-type: none"><li>• <u>USACE Levee Vegetation Policy Consequences</u> -As discussed earlier in our comments, the USACE is required to review and revise their levee vegetation policy per language in the Congressional WRRDA bill approved in June, and the CVFPP adopted an alternative levee vegetation strategy in 2012 that does not comply with the USACE’s policy. the Issue Paper should delete the sentence stating that "some progress has</li></ul>	<p>V.b. Comment noted.</p> <p>V.c. See response to IV.d. regarding vegetation.</p> <p>Delta Plan policy ER P4 only requires setting back levees where feasible.</p>
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	<p>occurred" in gaining federal approval to exempt Delta levees and add in more description of the subsequent impacts and consequences if Delta levees lose PL 84-99 eligibility for failing to comply with federal vegetation policy.</p> <ul style="list-style-type: none"><li>• <u>Setback Levee Consequences</u> - The discussion of the Delta Plan’s policy on setback levees fails to discuss the consequences implementation will have on Delta communities, transportation, recreation, agricultural production, public safety, or feasibility.</li><li>• <u>State’s Existing Flood Protection Interests</u> - This Issue Paper should expand Question 3 discussion by describing the other laws, regulations, and agreements the State is bound by that may conflict with or increase the costs of implementing the Delta Plan’s setback levee and vegetation policies.</li></ul> <p><b>d. Question 4: What Threatens Delta Levees?</b></p> <ul style="list-style-type: none"><li>• <u>Earthquakes and Subsidence</u> - As another example where the Issue Paper should provide more context is the assertion on page 11 that there are four geologic and hydrologic forces that not only threaten Delta levees, but also claims these threats and consequences are increasing steadily. The Issue Paper should clarify these concerns are based on assumptions and probability, not any documented occurrences. If the Council would like evidence to support such assumptions, they should consider directing the ISB to conduct scientific studies on the direct effect of subsidence and earthquakes on levee stability.</li></ul> <p>Surveys and geotechnical evaluations show that subsidence rarely occurs close enough to the levee to cause instability and CCVFCA is not aware of any studies that have analyzed a nexus between landside subsidence of peat soils threatening the foundations or stability of levees either. So the Council should consider commissioning such a study.</p> <ul style="list-style-type: none"><li>• <u>Open Water Seepage and Erosion</u> - When an island fails and is not reclaimed (drained and levee breach repaired)...the strong winds</li><li>• <u>BDCP Impacts to Flood Protection</u> - Rather than repeat the flood control impacts in the Delta from the BDCP proposed encroachments on the SPFC, the Association can provide specific water elevation changes and locations, flood flow impediments, and other adverse effects upon request by ARCADIS.</li></ul> <p><b>e. Question 5: Who is Responsible for the Delta’s Levees?</b></p> <p>The Association recommends a clarification regarding the definition of local agencies that maintain levees mentioned on page 12 because there are not “nearly 100” reclamation districts.</p> <p><b>f. Question 6: What plans guide the State’s investment in Delta levees?</b></p> <p>The Association was pleased to see the CVFPP in particular mentioned in this section. However, we would request specific mention of the regional coordination efforts to plan local flood protection improvements, and the role that Regional Flood Control Agencies such as WSAFCA and SJAFCFA have in capital improvements that guide overall flood protection strategy from a regional level be disclosed too.</p> <p><b>g. Question 7: How are Delta levee maintenance, operation, and improvements funded now?</b></p> <p>The fifth paragraph of page 16 reports the Delta Special Projects program provided more than \$350 million to the Delta's local agencies. If we then add the entire state</p>	<p>V.d. These potential threats have been discussed in numerous documents and reports and we cite one reference, in particular, that also happens to mention them.</p> <p>Council staff would be happy to review any specific water elevation changes and locations, flood flow impediments, and other adverse effects for possible inclusion or reference with the Delta Levee Investment Strategy.</p> <p>V.e. The DSC website lists 87 RDs and 6 islands/tracts</p> <p>V.f. A paragraph discussing regional efforts has been added.</p> <p>V.g. Comment noted.</p>
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	<p>expenditure under the subventions program (\$200 million) to this figure, it would appear that the state cost share is closer to \$550 million.</p> <p>Table 4 (“DWR Priorities for Delta Integrated Flood Management,” page 17) also presents some inaccuracies. The description that \$218 million of bond funds has been expended in the Delta appears deceptive, particularly given the fact that the Issue Paper’s own Table 5 reports that only \$110 million has been spent on levee work (Subventions and Special Projects). Clarification of these figures is needed.</p> <p>The statement on page 16 that only project levees with more than 50% of the island acreage within the Primary Zone is incorrect. All project levees in the Primary Zone are eligible for Delta Levees Subventions Program funds.</p> <p><b>h. Question 8: What level of Delta levee improvements is warranted?</b> CCVFCA found the description of the PL-84-99 standard confusing. The Issue Paper says the PL84-99 standard "approximates protection against a 50-year flood." However, the Corps of Engineers' Guidelines for Rehabilitation of Non-Federal Levees in the Sacramento-San Joaquin Legal Delta, CA" 3 September 1987 does not describe 50-year protection or any other design level requirement. The Association is aware of the application of the standard in the Corps’ Levee Owner’s Manual for Non - Federal Flood Control Works (2006), but this standard is used to determine whether a State or local government is eligible for "advance measures" assistance from the Corps. Therefore, the source of this statement should be noted and corrected.</p> <p>The Association therefore urges the Council to avoid reference statistics from the [DWR LiDAR analysis] in any discussion of the HMP.</p> <p><b>i. Question 9: how should levee maintenance and improvement costs be allocated?</b> We recommend the Issue Paper provide a little more context to the single sentence stating Delta RDs budget “less than \$50,000 to \$100,000 annually for levee maintenance.” This annual budget number was provided by the Association in comments on the Delta Plan as an example, but we qualified with the fact that it was not based on any actual survey of RDs or review of annual budgets, so that should be mentioned here.</p> <p>Instead of referencing an old ability to pay study from 1992 covering only western Delta islands, the Issue Paper could mention the more recent M-Cubed study comparing two districts (Bishop and Empire Tracts, 207) to test the difference between the ability to pay for an agricultural district and an urbanizing district.</p> <p>The Issue Paper should address the “domino effect” in regard to levees that may, or may not, be maintained in the future in a levee prioritization strategy.</p> <p><b>j. Question 10: What is the federal government’s role?</b> This section should develop creative ideas on how to leverage and incentivize federal funding. The State’s strategy for this section should include: disclose the State’s goals regarding the role federal funding should play in a Delta levee investment strategy and identify objectives describing actions designed to leverage increased federal funding by creating incentives and removing historical barriers to future federal investment in Delta levees.</p>	<p>Sentence has been revised to show that \$218 million includes \$110 million for Subventions and Special Projects.</p> <p>See previous response regarding the eligibility of project levees in the Primary Zone for the Subventions Program.</p> <p>V.h. This sentence has been removed.</p> <p>Comment noted.</p> <p>V.i.</p> <p>Comment noted.</p> <p>Council staff have reviewed the M-Cubed study and will discuss its recommendations on performing analyses as part of the Delta Levee Investment Strategy.</p> <p>The Delta Levee Investment Strategy will consider the effects of maintaining levees.</p> <p>V.j. Council can consider making recommendations</p>
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	<p>CCVFCA has major concerns with the Issue Paper perpetuating misleading cost figures for levee repairs and subsequent island reclamation efforts associated with the 2004 Jones Tract flooding in the Issue Paper. This paragraph describes an estimated \$90 million total cost for levee repairs following the infamous sunny day inundation of the island. This number overstates the actual levee rehabilitation and recovery total and State costs by a factor of three. The Association would like the Issue Paper to correct this figure.</p> <p>The Association has provided a spreadsheet detailing the actual Jones Tract costs, to assist the Council in its efforts.</p> <p><b>k. Question 11: What conditions should be attached to State funding of levees?</b> (no actual comments on paper)</p> <p><b>l. Question 12: What provision should be made to improve habitat for fish and wildlife or provide recreation?</b> CCVFCA’s primary concerns with the Issue Paper’s discussion of levee setbacks and vegetation was already addressed in Question 4.</p> <p><b>m. Question 13: What if local agencies don’t act?</b> <b>They offer advice</b>, describing state maintenance are options for levee districts and describes that by DWR “finding deficiencies in levee maintenance for some districts, these can include minor “cosmetic” fixes in a levee district that faces more severe challenges to life and property that require funding to be focused on levee repairs and improvements to avoid immediate failure”, so this should be at least recognized.</p> <p><b>n. Question 14: How should the State’s levee priorities address the risk of State liability for levee failures?</b> <b>They give background information on prior floods and cost of repairs and damages.</b> For example, After the 1986 flood, a lawsuit involving some 3,000 plaintiffs claiming damages from a SPFC Project levee failure which resulted in evacuations, deaths, and hundreds of millions of property damage was filed against the State (<i>Paterno v. State of California</i>).</p> <p><b>o. Question 15: What about climate change?</b> The Association is optimistic about the Delta’s ability to weather climate change.</p> <p><b>VI. Closing Comments:</b> We hope the corrections to incorrect or unsubstantiated statements pointed out in the Issue Paper will be corrected and that the Council will pursue our recommendation to utilize local Delta engineers on expert technical panels to offer their knowledge and experience in methodologies to quantify and allocate benefits associated with flood protection.</p>	<p>This figure was quoted from the <i>Levee Decisions and Sustainability for the Delta, including Technical Appendix B</i> document.</p> <p>V.k. (no actual comments on paper)</p> <p>V.l. (see responses regarding question 4)</p> <p>V.m. (no actual comments on paper)</p> <p>V.n. (no actual comments on paper)</p> <p>V.o. (no actual comments on paper)</p>
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Department of Fish and Wildlife

**General Comments**

- 1. Throughout the paper, review whether ‘state’ should be ‘State.’

**Introduction and Problem Statement**

- 1. In Table 2, the Levee Network description should add a statement that it also protects the infrastructure of roads, railroads, gas pipelines, and electrical transmission lines. These are also protected by the levees in the Delta. Also, “net enhancement” should be changed to “net increase” in two of the table cells.
- 2. Regarding the statement “The Legislature limited the duration of its recent reauthorization of a key state State Delta levee funding program” in the last paragraph before the “The Council’s 2014-16 Delta Levee Priorities Update” header, If this is referring to the Delta Levees Subvention and Special Projects Program, it is a normal process for the program to have a periodic sunset date and to have the legislature re-authorize funding to continue. The “limited duration” of the program authorized by legislation is a regular part of the Program, and not because they don’t believe the Programs are working and beneficial. This should be reworded to reflect what is outlined in the comment above.

**Question 1: What are the Delta Levees?**

- 1. The section below seems to be more of an answer to the question “What types of levees occur in the Delta?”

**Question 2: What Goals and Objectives Should State Investment in Delta Levees Further?**

- 1. This seems awkward and should be reworded as follows: “What should be the goals and objectives of State investments in the Delta Levee system?”

**Question 3: What are the State’s interests in the Delta?**

- 1. In the Delta ecosystem section:
  - a. Not only “aquatic life”, but also terrestrial life.
  - b. The Suisun Marsh Salinity Control Gates provide water quality benefits, ie. maintain lower salinities during low outflow periods to meet Water Quality standards. Distribution systems just deliver water to managed wetlands, their WQ and water level control seem to be over stated.
  - c. Add the following sentence to this section: The Delta also provides habitat for numerous listed and special status terrestrial species including Swainson’s Hawk, Giant Garter Snake, Riparian Brush Rabbit, Western Burrowing Owl, Pacific Pond Turtle, and wintering Sand Hill Cranes.
  - d. For paragraph beginning “Restoring the Delta ecosystem will entail” change “it may still be possible sometimes” to “should be a priority”
  - e. For paragraph beginning “ Vegetation on levees and adjoining berms” it would be nice to include illustrations of what the progress is that has occurred.

**Question 4: What Threatens Delta Levees?**

- 1. Regarding “140 levee failures in the last century” in the first paragraph: only 2 occurred since the year 2000 and those were sunny-day levee breaks on sections of levee that had recently been repaired. This section should be rewritten to lay out a clearer picture of the status of levee breaks over the last couple of decades and show that with the inception of numerous levee programs, including SB34 in 1988 and AB360 in 1995 which provided more funding and increased the cost share benefits to reclamation districts, the number of breaks has greatly decreased, even in comparison to the 1980’s and that levee system as a whole has improved.

**General Comments**

- 1. The paper has been reviewed and edited as necessary.

**Introduction and Problem Statement**

- 1. Table 2 is from the Delta Plan. Council may consider any necessary revisions in updating the Plan’s narrative in response to the Delta Levee Investment Strategy.
- 2. The intent for this paragraph is to point out that the State is reassessing the direction needed for Delta protection.

**Question 1**

Comment noted.

**Question 2**

Comment noted

**Question 3**

- 1a. Examples of terrestrial life have been included in the section.
- b. Comment noted
- c. This sentence has been added to the Delta ecosystem section.
- d. It is not the intention of this paragraph to direct restoration methods.
- e. This paragraph has been expanded to include a discussion of the current status.

**Question 4**

- 1. A new Table 4 has been added along with a discussion of recent levee improvements made using bond money.

	<p><b><u>Question 6: What plans guide the State’s investment in Delta levees?</u></b></p> <ol style="list-style-type: none"><li>1. In the paragraph beginning with “For the Delta, the plan’s actions” change the sentence “the lower end of the <u>river</u> upstream from Rio Vista” to “the lower end of the <u>Yolo Bypass</u> upstream from Rio Vista”</li><li>2. Suisun Marsh section bulleted paragraph:<ol style="list-style-type: none"><li>a. Change “recommends that public funding” to “identifies that public funding”</li><li>b. Insert the underlined text in this sentence: In addition, the Suisun Marsh Plan notes that as tidal marshes are restored there, some levees <u>affected by that restoration</u> will require reinforcement, more maintenance, and in some instances, significant upgrades, <u>which would need to be addressed as part of the proposed restoration</u>.</li></ol></li></ol> <p><b><u>Question 7: How are Delta levee maintenance, operation, and improvement funded now?</u></b></p> <ol style="list-style-type: none"><li>1. For paragraph starting “DWR’s Delta Levee Maintenance Subventions Program provides” maybe the CDFW role in this program should be included in this paragraph?</li><li>2. Insert the following paragraph in this section: Under the Delta Levee Maintenance Subventions and Special Flood Control Projects programs, the dual commitment to levees and fish and wildlife is the foundation for the collaboration between local levee maintaining agencies and DWR and DFW. As mandated by Water Code Section 12314 and 12987, DFW ensures that there is no net loss of fish and wildlife habitat and a long-term improvement of fish and wildlife habitat in conjunction with State sponsored levee work. Under an interagency agreement with DWR, DFW staff inspects both levee maintenance and improvement projects, and authorizes expenditures of funds for levee work after determining that full mitigation and net habitat improvement have been provided. DFW performs assessments of existing habitats, determines potential impacts of levee work, develops onsite and large-scale mitigation sites, assists with the planning of larger projects including designing and implementing habitat restoration and monitoring plans, and invasive plant control measures, and ensures that mitigation and enhancement sites are monitored and maintained in good condition in-perpetuity.</li></ol> <p><b><u>Question 12: What provision should be made to improve habitat for fish and wildlife or provide public recreation?</u></b></p> <ol style="list-style-type: none"><li>1. Insert the following text before Question 13: A review of current levee related ecosystem enhancement programs should be conducted to assess performance and the benefits provided to the ecosystem.</li></ol> <p>To determine the most effective integration of habitat enhancement with levee improvements a plan should be developed identifying flood improvement needs in areas identified in the Delta Plan for habitat enhancement/restoration. This plan would identify the most appropriate locations for levee setbacks, channel margin enhancement and other habitat improvements based on ecosystem benefits and compatibility with flood protection improvements.</p>	<p><b><u>Question 6</u></b></p> <ol style="list-style-type: none"><li>1. “River” has been changed to “Yolo Bypass.”</li></ol> <p>2a. The report cited states that public funding for Suisun Marsh levees needs to be expanded to address maintenance and improvements. This seems to be a recommendation.</p> <p>b. The sentence has been left as-is to reflect the text in the report cited.</p> <p><b><u>Question 7</u></b></p> <ol style="list-style-type: none"><li>1. The role of DFW related to the Subventions Program is described under Question 5 in the discussion of that agency’s responsibility related to levees.</li><li>2. This paragraph has been added in the Question 12 section, instead.</li></ol> <p><b><u>Question 12</u></b></p> <ol style="list-style-type: none"><li>1. A new paragraph has been added to this section that describes the role of DFW in working with DWR in evaluating habitat improvements related to levee work.</li></ol>
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